


-FORM PTO-1449 COMMERCE (REV. 7-80)	U.S. DEPARTMENT OF PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MEMC 98-4650 (2293)	SERIAL NO. 09/608,302
			APPLICANT Wils n, et al.	
			FILING DATE June 30, 2000	GROUP 1765

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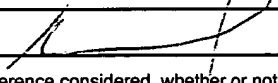
U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>M</i>	66	4,958,061	09/1990	Wakabayashi et al.	219	411	
	67	5,100,502	03/1992	Murdoch et al.	156	643	
	68	5,324,155	06/1994	Goodwin et al.	414	225	
	69	5,332,443	07/1994	Chew et al.	118	729	
	70	5,551,982	09/1996	Anderson et al.	118	715	
	71	5,589,224	12/1996	Tepman et al.	427	248.1	
	72	5,738,751	04/1998	Camerson	156	345	
	73	5,772,773	06/1998	Wytman	118	729	
	74	5,848,670	12/1998	Salzman	187	272	
	75	5,856,240	01/1999	Sinha et al.	438	758	

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*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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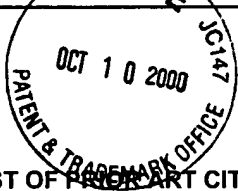
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<i>[Handwritten Initial]</i>	1	4,314,595	02/1982	Yamamoto et al.	148	1.5	
	2	4,376,657	03/1983	Nagasawa et al.	148	1.5	
	3	4,437,922	03/1984	Bischoff et al.	156	603	
	4	4,505,759	03/1985	O'Mara	148	1.5	
	5	4,548,654	10/1985	Tobin	148	1.5	
	6	4,851,358	07/1989	Huber	437	10	
	7	4,868,133	09/1989	Huber	437	10	
	8	5,271,796	12/1993	Miyashita et al.	156	626	
	9	5,327,007	07/1994	Imura et al.	257	610	
	10	5,401,669	03/1995	Falster et al.	437	12	
	11	5,403,406	04/1995	Falster et al.	148	33.2	
	12	5,445,491	08/1995	Nakagawa et al.	414	786	
	13	5,445,975	08/1995	Gardner et al.	437	10	
	14	5,487,358	01/1996	Ohta et al.	117	200	
	15	5,502,010	03/1996	Nadahara et al.	437	247	
	16	5,502,331	03/1996	Inoue et al.	257	617	
	17	5,534,294	07/1996	Kubota et al.	427	255	
	18	5,561,316	10/1996	Fellner	257	549	
	19	5,587,019	12/1996	Fujie	118	725	
<i>[Handwritten Initial]</i>	20	5,593,494	01/1997	Falster	117	2	

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*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	21	5,611,855	03/1997	Wijaranakula	117	2	
	22	5,674,756	10/1997	Satoh et al.	437	10	
	23	5,738,942	04/1998	Kubota et al.	428	428	
	24	5,788,763	08/1998	Hayashi et al.	117	2	
	25	5,789,309	08/1998	Hellwig	438	478	
	26	5,820,685	10/1998	Kurihara et al.	118	729	
	27	5,860,848	01/1999	Loncki et al.	451	36	
	28	5,939,770	08/1999	Kageyama	257	611	
<i>[initials]</i>	29	5,944,889	08/1999	Park et al.	117	94	

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*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
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<i>[initials]</i>	30	43 23 964 A1	01/1994	Germany	H01L	21/324		X
	31	402243594A (Abstract Only)	09/1990	Japan	C30B	25/02		
	32	3-9078	02/1991	Japan	C30B	29/06	X	
	33	5-155700	06/1993	Japan	C30B	33/02	X	
	34	7-201874	08/1995	Japan	H01L	21/322	X	
	35	7321120 (Abstract Only)	12/1995	Japan	H01L	21/322		
	36	7335657 (Abstract Only)	12/1995	Japan	H01L	21/322		
<i>[initials]</i>	37	8045944 (Abstract Only)	02/1996	Japan	H01L	21/322		

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FOREIGN PATENT DOCUMENTS CONTINUED

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	38	8045947 (Abstract Only)	02/1996	Japan	H01L	21/322		
	39	8045945	02/1996	Japan	H01L	21/322	X	
	40	9-199416	07/1997	Japan	H01L	21/20	X	
	41	11-150119	06/1999	Japan	H01L	21/322	X	
	42	11-067781	03/1999	Japan	H01L	21/322	X	
	43	0 503 816 B1	09/1996	EPO	C30B	33/02		
	44	0 536 958 A1	04/1993	EPO	C30B	15/00		
	45	0 716 168 A1	06/1996	EPO	C30B	15/14		
	46	WO 98/38675	09/1998	PCT	H01L	21/322		
	47	WO 98/45507	10/1998	PCT	C30B	15/00		
	48	WO 00/08677	02/2000	PCT	H01L	21/22		
	49	WO 00/13211	03/2000	PCT	H01L	21/00		
	50	WO 00/34999	06/2000	PCT	H01L	21/322		

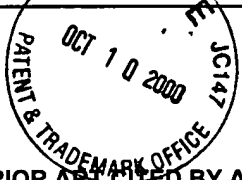
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	51	Abe, T., "Innovated Silicon Crystal Growth and Wafering Technologies", Electrochemical Soc. Pro., Vol. 97, No. 3, pp. 123-133, 1997
	52	Abe, T., "Defect-Free Surfaces of Bulk Wafers By Combination of RTA and Crystal Growth Conditions", (reference information unknown)
	53	Chiou, H., "The Effects of Preheatings on Axial Oxygen Precipitation Uniformity in Czochralski Silicon Crystals", J. Electrochem. Soc., Vol. 139, No. 6, pp. 1680-1684, June, 1992

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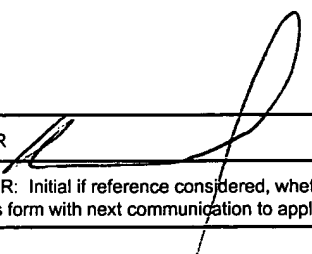
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54	✓ Falster, R., et al., "The Engineering of Silicon Wafer Material Properties Through Vacancy Concentration Profile Control and the Achievement of Ideal Oxygen Precipitation Behavior", Mat. Res. Soc. Symp. Proc., Vol. 510, pp. 27-35, 1998
55	✓ Hara, A., et al., "Enhancement of Oxygen Precipitation in Quenched Czochralski Silicon Crystals", J. Appl. Phys., Vol. 66, No. 8, pp. 3958-3960, 1989
56	✓ Hawkins, G. A., et al., "Effect of Rapid Thermal Processing on Oxygen Precipitation in Silicon", Mat. Res. Soc. Symp. Proc., Vol. 104, pp. 197-200, 1988
57	✓ Hawkins, G. A., et al., "The Effect of Rapid Thermal Annealing on the Precipitation of Oxygen in Silicon", J. Appl. Phys., Vol. 65, No. 9, pp. 3644-3654, 1989
58	✓ Jacob, M., et al., "Influence of RTP on Vacancy Concentrations", Mat. Res. Soc. Symp. Proc., Vol. 490, pp. 129-134, 1998
59	✓ Nadahara, S., et al., "Hydrogen Annealed Silicon Wafer", Solid State Phenomena, Vols. 57-58, pp. 19-26, 1997
60	✓ Pagani, M., et al., "Spatial Variations in Oxygen Precipitation in Silicon After High Temperature Rapid Thermal Annealing", Appl. Phys. Lett., Vol. 70, No. 12, pp. 1572-1574, 1998
61	✓ Schmolke R., et al., "Defect Depth Profile in Si(100) p/p Epitaxial Wafers", The Electrochem Soc. Proc., Vol. 98, No. 1, pp. 855-866, 1998
62	✓ Shimizu, H., et al., "Effects of Surface Defects (COPs) On Isolation Leakage And Gate Oxide Integrity in Mos Large-Scale-Integrated-Circuit Devices And Cost Effective p-p- Epitaxial Wafers", Electrochemical Society Proceedings, Volume 99-1, pp. 315-323 (from a presentation on or about May 3, 1999)
63	✓ Shimizu, H., et al., "Excellence of Gate Oxide Integrity in Metal-Oxide-Semiconductor Large-Scale-Integrated Circuits Based on P-P-Thin-Film Epitaxial Silicon Wafers", Jpn. J. Appl. Phys., Vol. 36, p. 2565-2570, 1997
64	✓ Shimura, F., "Semiconductor Silicon Crystal Technology", Academic Press, Inc., San Diego, CA, pp. 361-367, 1989
65	✓ Zimmerman, H., et al., "Vacancy Concentration Wafer Mapping in Silicon", J. Crystal Growth, Vol. 129, pp. 582-592, 1993

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